

ABSTRACT

The invention disclosed is an apparatus, or system, and methodology for power efficient, flexible, data efficient wireless transmission, receipt and interpretation of signals from a patient, such signals reflecting one or more measured physiological and patient specific parameters such as an electrocardiogram, electroencephalogram, electromyogram and/or patient ID. The system includes a mobile transmitter for attachment to a patient, which is a battery powered sensor/transmitter device for transmission of enhanced data transmission rate signals in multiple frequencies within a given frequency band; a receiver for receiving the signals; and a display analysis and/or recording device for interpretation of the received signals. The system operates using a spread spectrum transmission technique which reduces interference with the detection of the transmitted signals. The mobile transmitter and the receiver include corresponding optical components for establishing a duplex optical link allowing for changes to operating characteristics while transmission is occurring.